

ATTORNEY DOCKET NO. 12016.0042U1
Application No. 09/813,681

REMARKS

Claims 1-2, 5-7, 16, 17, 19-22, and 31 stand rejected under 35 U.S.C. §103(a) as being obvious over Derby et al. (U.S.P.N. 6,097,498) (hereinafter "Derby") in view of Herzog et al. (U.S.P.N. 4,651,278) (hereinafter "Herzog"), and further in view of Dawson (U.S.P.N. 5,553,160) (hereinafter "Dawson"). Claims 10-12, 15, 25-27, 30 and 32 stand rejected as obvious over Derby in view of Herzog, and further in view of Thompson (U.S.P.N. 4,463,374) (hereinafter "Thompson"). Claims 8, 9, 23, and 24 stand rejected as obvious over Derby in view of Dawson, and further in view of Thompson. In light of the Remarks, the Applicants respectfully traverse the rejections and request reconsideration and allowance of the pending claims.

Rejections Under 35 U.S.C. §103(a)

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 493 (Fed. Cir. 1991).

Independent Claim 1

The Office Action rejects independent claim 1 as obvious over a combination of Derby in view of Herzog and further in view of Dawson, and relies on several points of rejection. Therefore, several points of rejection will be discussed in turn.

To support a rejection of claim 1 as obvious, the Office Action states:

Regarding claim 1: Derby teaches a method of transmitting print data (fig. 2) from a host (18, fig. 3) to a printing device (22, fig. 3, column 4, lines 44-48) for processing, comprising the steps of: (a) dividing the print data into *separate data streams* (fig. 2); (Emphasis added).

ATTORNEY DOCKET NO. 12016.0042U1
Application No. 09/813,681

The Applicants respectfully assert that claim 1 is unobvious over Derby in view of Herzog and Dawson where the cited language fails to disclose dividing print data into *separate data streams* as recited in claim 1 of the Application.

Claim 1 of the Application states in relevant part:

A method of transmitting print data from a host to a printing device for processing, comprising the steps of:

- (a) dividing the print data into *separate data streams*;
(Emphasis added).

The invention and disclosure of Derby are directed to improvements of Herzog (both commonly assigned to IBM), with Herzog directed to an Intelligent Printer Data Stream (IPDS) which manages and controls printer processes by combining both print data and print commands into a *single* data stream.

IPDS provides a structured field data stream that is designed to manage and control printer processes by allowing *both data and commands to be passed to the printer using the data stream*. This process enables the transmission of commands and data from a host application to the printer in a manner that is independent of the communication means and the transmission protocol.
Derby Col. 1, lines 11-24. (Emphasis added).

Figure 2 of Derby likewise discloses a *single* stream of data. Claim 1 of the Application recites a method for transmitting print data by dividing the print data into *separate data streams*. Thus, the Applicants respectfully assert that claim 1 is allowable for at least the reason that the cited reference only discloses a single data stream which carries both data and commands, whereas claim 1 of the application recites dividing print data into *separate* data streams. Furthermore, step (b) of claim 1 also recites the *data streams* limitation and is thus not taught or disclosed by the references for at least the reasons given for step (a).

The Office Action asserts that claim 1 is obvious in-part by relying on Derby to disclose the compressing step of claim 1. Claim 1 states in relevant part:

- (c) compressing the data segments with a compression algorithm;

The Office Action states that Derby discloses:

compressing the data segments with a compression algorithm
(page description language, column 4, lines 30-35; page
description language are compressed print data);

ATTORNEY DOCKET NO. 12016.0042U1
Application No. 09/813,681

Derby discloses a single print stream containing both data and commands formatted in a page description language. Derby Col. 1, lines 31-50; Col. 1, line 64 to Col. 2, line 12; Col. 4, lines 26-43; Col. 6., lines 15-24. As is known to those of ordinary skill in the art, a page description language (PDL) is a series of commands similar to a programming language (some PDLs are in fact full featured programming languages, such as PostScript) which is used to describe a document in a device independent way, allowing the document to be printed on any printer with the appropriate PDL interpreter available.

Derby accordingly discloses the use of PDLs and PDL interpreters to describe and print documents:

Typically, the printer control and page composition information is expressed in a common page description language such as PostScript. Derby Col. 1, lines 34-36.

In the example illustrated in FIG. 1, the printer is able to recognize three different page description languages. When a particular language is identified, J.sub.LANGP, an appropriate one of the three language interpreters is activated. The task of recognizing the escape sequence which terminates the segment is assigned to the activated interpreter, which returns an END OF CURRENT STREAM DETECTED signal. A problem occurs when a printer does not include an interpreter for a specific page description language segment. Derby Col. 1, line 64 to Col. 2, line 4.

In a typical example, one interpreter 46 is used to interpret the PostScript.TM. page description language, while the other interpreter 48 is used to interpret the PCL.TM. page description language. The output of the activated interpreter is typically used to form a portion of a printed page, or an entire page, or multiple pages by being added to one or more logical pages 44. Derby Col. 5, lines 19-22.

The language cited in the Office Action similarly discloses:

A print job will typically include job-tracking information and print objects expressed in the native language, and may include print objects expressed in one or more foreign page description languages. The print objects are used to define the contents of anything from a portion of a printed page to an entire document. Derby Col. 4, lines 30-35.

The Applicants respectfully assert that references from Derby disclosing page description languages do not teach or disclose *data compression*. As is known in the art, data compression

ATTORNEY DOCKET NO. 12016.0042U1
Application No. 09/813,681

algorithms are used to reduce the size or compress a given input data set into a smaller compressed data set. Subsequently, the compressed data may be returned to its original state and size by decompressing it with an appropriate decompression algorithm. The Applicants respectfully assert that claim 1 is allowable for at least the reason the cited language from Derby only discloses page description languages, and does not teach or disclose *data compression* or *compressing* data segments with a compression algorithm as recited in claim 1.

When the limitations of claim 1 are read as a whole to define the claimed invention, claim 1 is allowable for at least the reason that none of the cited references, alone or in combination, disclose dividing print data into separate data streams, dividing the data streams into data segments, and compressing the data segments with a compression algorithm as recited in claim 1 of the Application. Similarly, steps (d)-(i) of claim 1 are each allowable as not disclosed by the cited references for at least one or more of the reasons given for the allowability of steps (a)-(c) of claim 1.

With regard to claim 1 of the Application, the Office Action asserts that it would have been obvious to combine Derby in view of Herzog and further in view of Dawson to arrive at the invention of claim 1. The Applicants respectfully assert that the Examiner has not provided the required objective suggestion or motivation to combine the references to arrive at claim 1 of the Application.

To prove obviousness, there must be a clear and particular showing to combine the cited prior art references based on *actual evidence*. In re Rouffet, 149 F.3d 1350, 1359 (Fed. Cir. 1998). Further, the fact that references *can* be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680 (Fed. Cir. 1990). The level of skill in the art cannot be relied upon to provide the suggestion to combine references. Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308 (Fed. Cir. 1999). If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900 (Fed. Cir. 1984). Further, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810 (CCPA 1959).

ATTORNEY DOCKET NO. 12016.0042U1
Application No. 09/813,681

The Applicants respectfully assert that the Office Action provides no objective motivation to combine the references to arrive at claim 1 of the Application. Derby discloses the use of a single stream containing data described in a page description language. Dawson is directed to a method for dynamically selecting whether an image is compressed using a lossless or lossy compression process. As understood by one of skill in the art, lossy data compression results in a compressed file, which, when subsequently decompressed, results in a degraded version of the input data; in other words, data is lost in the compression process. The Applicants respectfully assert that no motivation to combine Derby and Dawson exists because application of the compression process of Dawson would result in the degradation and possible corruption of data sent to a printer, rendering the cited references unsatisfactory for their intended purposes as well as changing their principles of operation.

In view of the Remarks, claim 1 of the Application is allowable for at least the reasons that not every claim limitation is disclosed by the cited prior art references, and because no objective evidence showing a motivation to combine the cited references to arrive at the invention of claim 1 has been provided.

Independent Claims 10, 16, 25, 31, and 32

The Applicants respectfully assert that independent claims 10, 16, 25, 31, and 32 are allowable for at least one or more of the reasons given for the allowability of claim 1.

Dependent Claims 2, 5-9, 11, 12, 15, 17-23, 26, 27, and 30

The Applicants respectfully assert that claims 2, 5-9, 11, 12, 15, 17-23, 26, 27, and 30 are allowable for at least the reason that each depends directly or indirectly from an allowable independent claim.

ATTORNEY DOCKET NO. 12016.0042U1

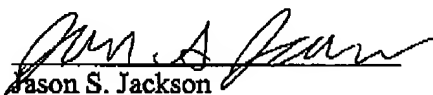
Application No. 09/813,681

CONCLUSION

In view of the above, each of the presently pending claims in the application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass the application to issue. If the Examiner believes discussion of any issue would expedite examination, the Examiner is encouraged to telephone the Applicants' undersigned representative. No additional fee is believed due. However, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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